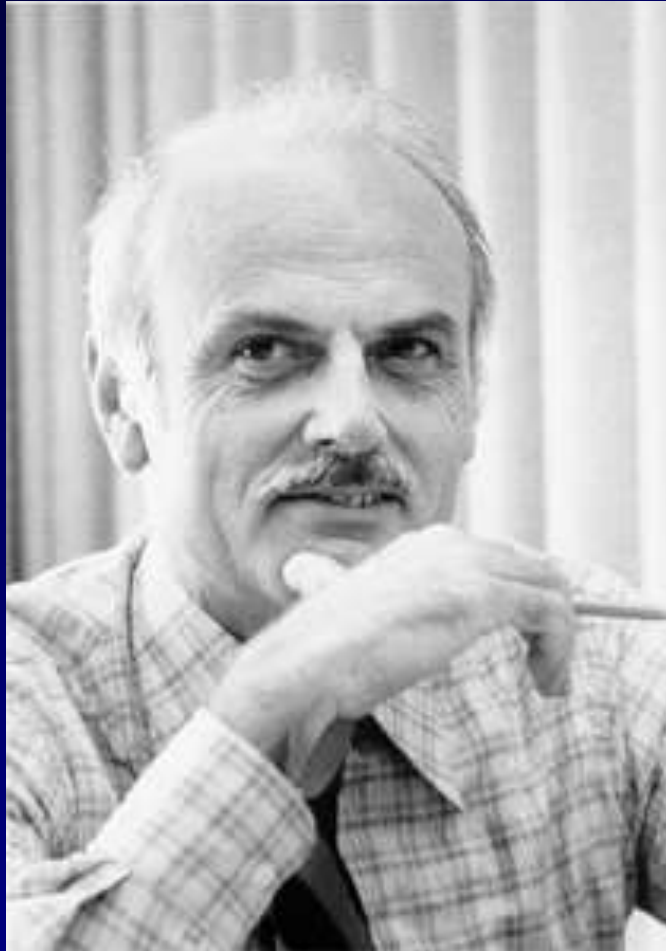




## Who is this?



**E. F. “Ted Codd”**

**1968 – He Invents Relational Theory in his mind**



# When was it published?

# 1970

## A Relational Model of Data for Large Shared Data Banks

*E. F. Codd*

Reprinted from *Communications of the ACM*, Vol. 13, No. 6, June 1970, pp. 377-387. Copyright © 1970, Association for Computing Machinery, Inc.

- [1. Relational Model and Normal Form](#)

### 1.3. A Relational View of Data

The term *relation* is used here in its accepted mathematical sense. Given sets  $S_1, S_1, \dots, S_n$ , (not necessarily distinct),  $R$  is a relation on these  $n$  sets if from  $S_1$ , and so on. We shall refer to  $S_j$  as the  $j$ th domain of  $R$ . As defined above,  $R$  is said to have degree  $n$ . Relations of degree 1 are often called *unary*.

For expository reasons, we shall frequently make use of an array representation of relations, but it must be remembered that this particular representation represents an  $n$ -ary relation  $R$  has the following properties:

1. Each row represents an  $n$ -tuple of  $R$ .
2. The ordering of rows is immaterial.
3. All rows are distinct.
4. The ordering of columns is significant - it corresponds to the ordering  $S_1, S_1, \dots, S_n$  of the domains on which  $R$  is defined (see, however, remark 5).
5. The significance of each column is partially conveyed by labeling it with the name of the corresponding domain.

The example in [Figure 1](#) illustrates a relation of degree called supply, which reflects the shipments-in-progress of parts from specified suppliers to specified projects. The relation is shown in the following table:

supply (supplier part project quantity)			
1	2	5	17
1	3	5	23
2	3	7	9
2	7	5	4
4	1	1	12

Figure 1. A relation of degree 4

One might ask: If the columns are labeled by the name of corresponding domains, why should the ordering of columns matter? As the example in [Figure 1](#)

# INGRES -

## What does InGReS stand for?

**Berkeley  
Engineering**



Volume 3, Issue 8  
October 2003

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Diagnosis On A Chip

A High-Tech Toast To  
Better Wines

Ultimate Auto-Pilot

# Lab Notes

Research from the College of Engineering, University of California, Berkeley

## 1974: The release of INGRES and the birth of the database industry

by David Pescovitz



Printer-friendly version

At the dawn of the digital age in the 1960s, large corporations began to migrate from paper records to digital files. The problem was that there was no easy way to find what you were looking for in the massive amounts of data stored. In the mid-1970s, UC Berkeley engineers pioneered a system to organize and access data that, in turn, spawned a \$7 billion dollar industry now driven by companies like Oracle, Microsoft and IBM.

In 1970, IBM researcher E. F. Codd published a seminal paper outlining a novel way to organize and access data. Codd's "relational model of data for large shared data banks" called for information to be stored in tables that could be searched using a high-level language. Instead of searching through one record at a time, the user could specify a single query that would be performed across all of the data. For example, the new approach would enable



Michael Stonebraker, co-inventor of the relational database.

# INteractive Graphics REtrieval System

# Who are these Guys? What Year is it?



**Ed Oates, Bruce Scott, Bob Miner, Larry Ellison - 1978** 4



# When was Oracle Started?



**June 16, 1977**

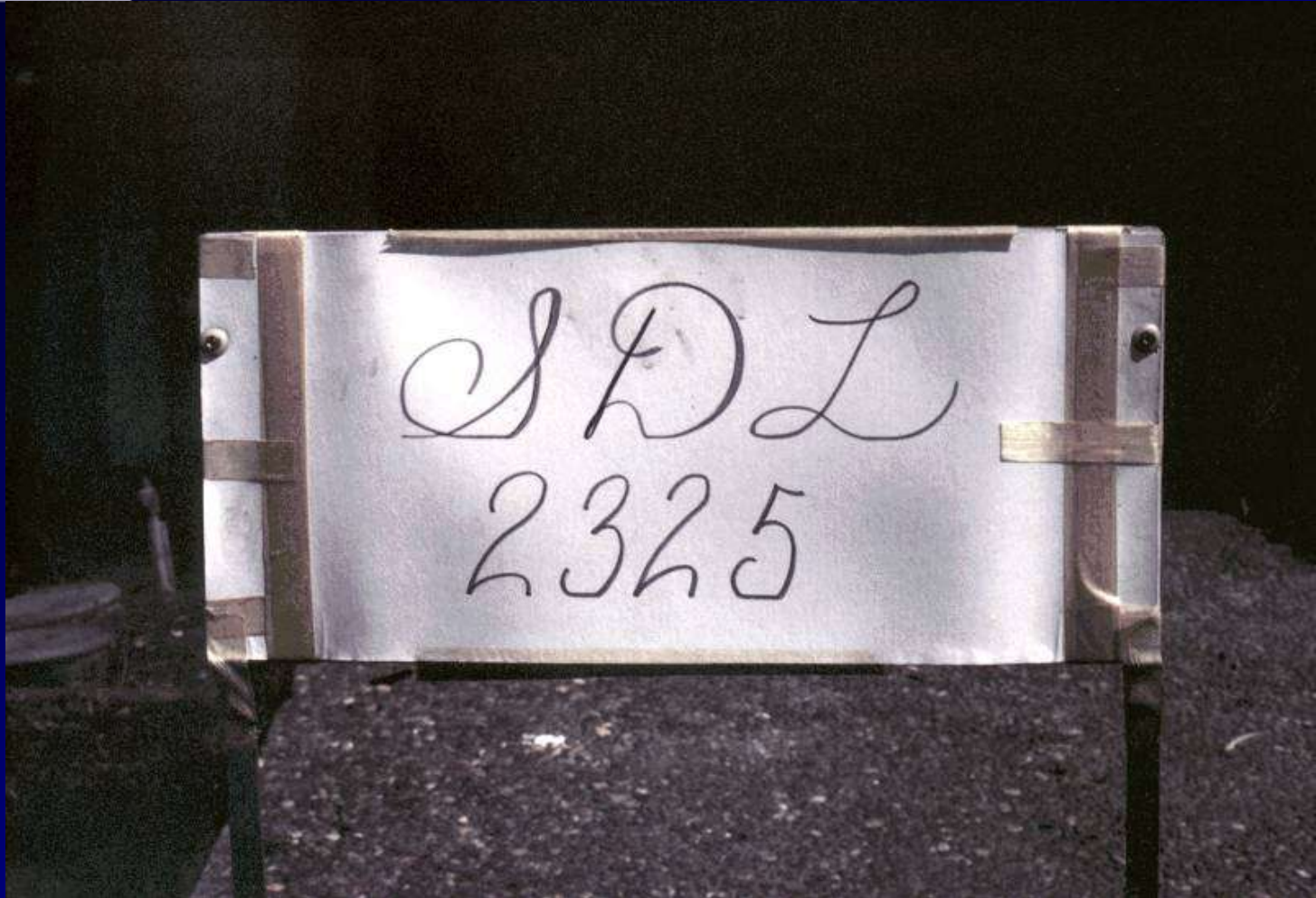


# When was Ford Started?



**June 16, 1903**

Under What name was Oracle started  
in 1977?



Software Development Laboratories – Oracle's 1<sup>st</sup> name



Where did Bob Miner, Ed Oates & Larry Ellison work before starting Oracle?

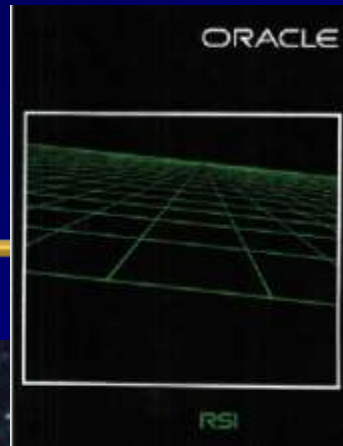
**Ampex**

Where did the name Oracle come from?

**Code Named for CIA project Larry/Bob worked on while at Ampex**



# What is RSI?



Relational Software Inc. – Oracle's 2<sup>nd</sup> name



## Version 1

- When did Oracle Version 1 come out?

There was No Version 1



## Version 2

When was the first commercial version -  
Oracle Version 2 first sold?

1979



## Where did Larry recruit their first CFO?

He recruited their Pizza delivery guy; He was taking accounting at Berkeley.



Who is it?

Where is he now?



Sohaib Abbasi – CEO of Informatica

(Creator of development tools – Forms...etc.)



# What version is it?

## TRY ORACLE'S \$1295 SQL DBMS FOR ONLY \$199 TODAY. OR ORDER VAPORWARE.

If you're looking forward to OS/2 and the next generation of PC database management systems to enable you to build larger, higher-quality PC applications, you'll be interested to know that:

- Ashton-Tate has announced its intention to replace its outdated database technology with a SQL DBMS under OS/2, and
- IBM has announced its intention to offer SQL for OS/2 in its Extended Edition.

All you have to do is wait. Wait for OS/2 and SQL. Wait until mid-1988... or later! Meanwhile you keep developing with soon-to-be obsolete dBASE™ technology.

But you don't have to wait for SQL on the PC.

Oracle has it now. And you don't have to wait for OS/2 to run programs larger than 640K. The ORACLE™ DBMS allows you to run OS/2-like programs under today's MS-DOS™.

ORACLE is the number-one selling



DBMS on both microcomputer and mainframes. If you try PC ORACLE, we think you'll make us number-one on PCs, too. That's why we're making you this special offer.

We've sold thousands of copies of PC ORACLE for \$1295. But now, for a limited time, we will send you the same, full-function version of ORACLE for only \$199\*.

That's right. Only \$199 for a PC SQL DBMS that is identical to the ORACLE that runs on mainframes, minicomputers and mainframes. \$199 for the only PC DBMS that lets you

write larger than 640K, OS/2-like programs and run them under today's MS-DOS.

ORACLE makes it easy to write large, high-quality applications using industry-standard SQL. Applications that run faster. Applications that are easier to use and have more capability. Multi-user, networked applications. Applications that can be developed on MS-DOS today, and then run unchanged on OS/2, minicomputers and mainframes.

So stop writing dead-end dBASE code today. And stop writing crumpled, limited to less than 640K applications. Call 1-800-345-DBMS today. Or use the rightmost coupon. Or mail one of the other coupons. And wait.

**ORACLE™**  
 (RELIABILITY • PORTABILITY • IMMUTABILITY)  
 Call 1-800-345-DBMS today.

**Dear Ashton-Tate,**  
 20500 Riverchase Avenue  
 Houston, TX 77058

Have you ever announced your intention to go to SQL? I really don't think that developing windows applications in dBASE II makes every individual your best software will be full featured and long time. Send me what you've got, when you get it.

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_  
 Zip \_\_\_\_\_

**Dear IBM,**  
 901 Orchard Road  
 Arden Hills, NY 11351

Subscribed to a think check / keep track- ing that you're already announced that you're going to announce SQL for OS/2 and for Personal System/2.

When you do, fill in the check amount. Please to keep from your intention in the IBM couple years.

Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_  
 Zip \_\_\_\_\_

**Dear Oracle,**  
 PC ORACLE • Oracle Corporation  
 5000 River Drive • Redwood City, CA 94061

I have never tried ORACLE so when I have agree to use the MS-DOS version for applications development / development of professional applications / systems and programs that I can use only now.

1 PC ORACLE \$199  
 2 ORACLE II 386 hardware \$199  
 3 ORACLE II 386 hardware \$199  
 4 PC ORACLE II 386 hardware \$199

Call me \_\_\_\_\_  
 Name \_\_\_\_\_  
 Address \_\_\_\_\_  
 City \_\_\_\_\_  
 State \_\_\_\_\_  
 Zip \_\_\_\_\_



Who is either of these guys?

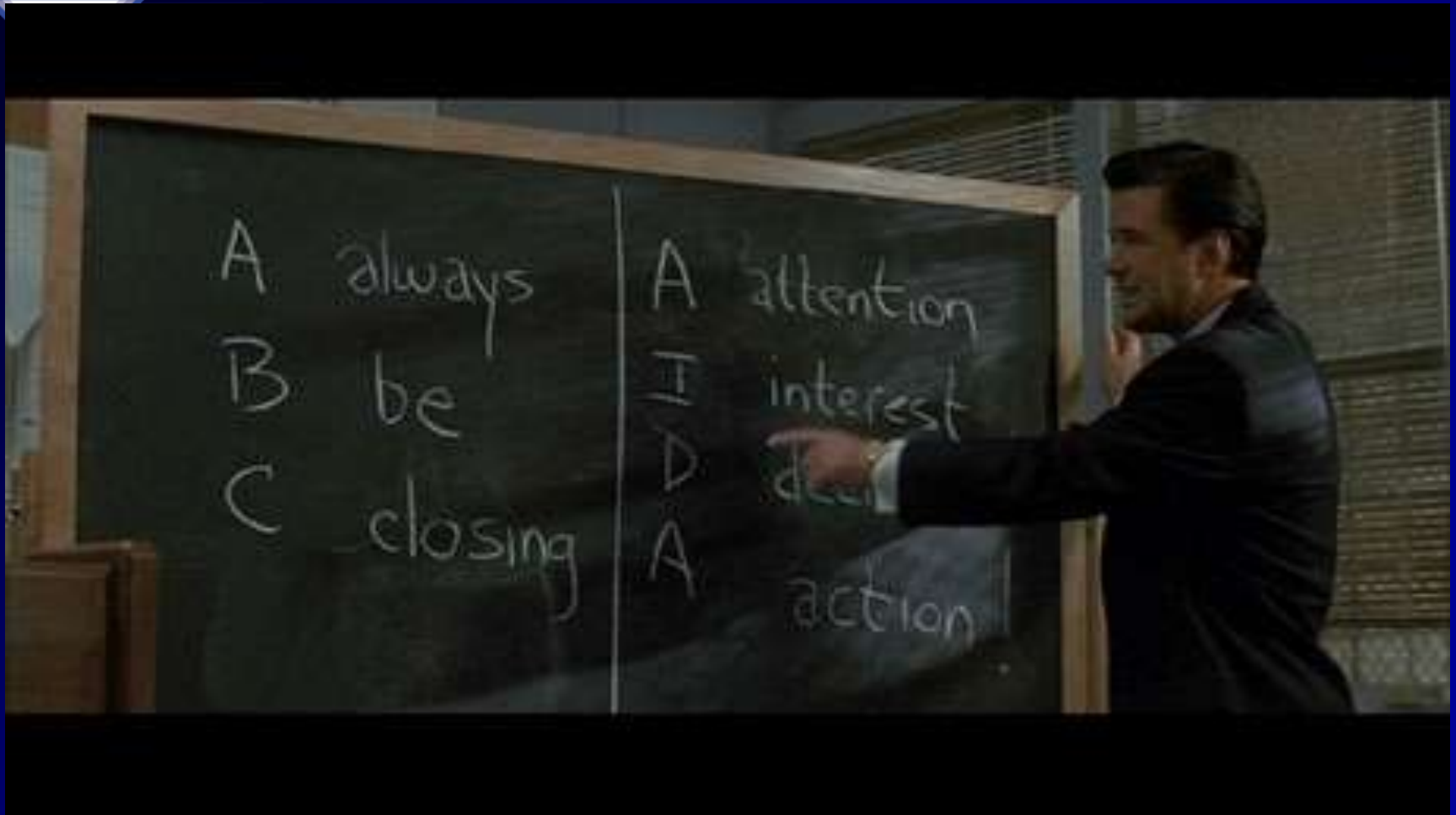


Stuart ? & Bob Miner

What movie is it from?

What famous actors were in it?

TUSC



Glengarry Glen Ross & Alec Baldwin (Jack Lemon, Al Pacino, Kevin Spacey, Alan Arkin, Ed Harris)



# Oracle Graph – What version was it?

**ANNOUNCING ORACLE FOR 1-2-3. JUST IN TIME - \$199**

Spreadsheet growing too big and complex? You need a database. No time to learn a database? You need the ORACLE database add-in for Lotus 1-2-3.

If you have Lotus 1-2-3 and 5193, you can now solve the six biggest spreadsheet problems:

1. How can you spread your data over multiple sheets and keep track of the information you need?
2. How can you handle the fact that your spreadsheets are growing so fast?
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5. Do you have too many spreadsheets to back up?
6. Do you have too many spreadsheets to maintain?

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**ORACLE FOR 1-2-3: THE NEW STANDARD**

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**THE ADVANTAGES OF DATABASE TECHNOLOGY**

If you don't have a database, you can't use the power of a database. It's time to get a database. It's time to get a database. It's time to get a database.

**ORACLE** CALL 1-800-ORACLE EXT. 150 TODAY.



- SQL\*Calc for Lotus 1-2-3 & SQL\*Graph
- Oracle Version 5



March 4, 1986 –  
Who is it?



Sun IPO (SUN=Stanford University Network)



# March 12, 1986 – Oracle

## What amount did Oracle IPO at?



**ORCL IPO:**  
**Open:15**  
**Close:20.75**  
**Up 38%**



March 13, 1986 –  
Who is it?



Microsoft IPO

# Client Server?



- Who (3 Oracle Employees) implemented the first client server version of Oracle & When?



1987



Where is it?



Redwood Shores California

Who flies this plane?

What city is in the background?



Sean Tucker & San Francisco



# What was the tag line for RAC originally?



## Unbreakable

**ORACLE**

**Can't break it.**  
Your business relies on information and a reliable place to keep it in. Eliminate the need for planned downtime and withstand any unplanned failure -- system failure, storage failure, site failure or human error, all with Oracle®.

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Oracle's security is fully proven, having been approved by 14 independent security evaluations. Only Oracle® provides you with the security and encryption you need to protect your data in storage and transmission.

You can't afford to wait! Get your **FREE** Oracle® eKit and build an unbreakable business today:

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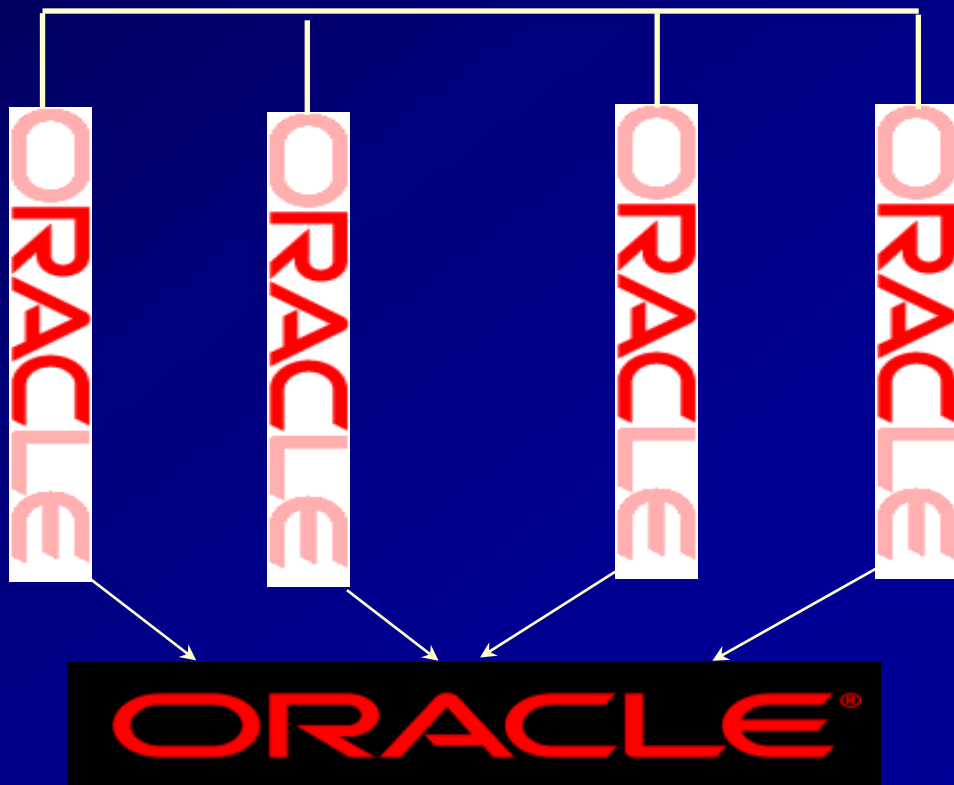
I'm a new user:  
[Get your FREE eKit Now!](#)

I already have an account:

Username:

Password:

Lost your password? [Click here](#)





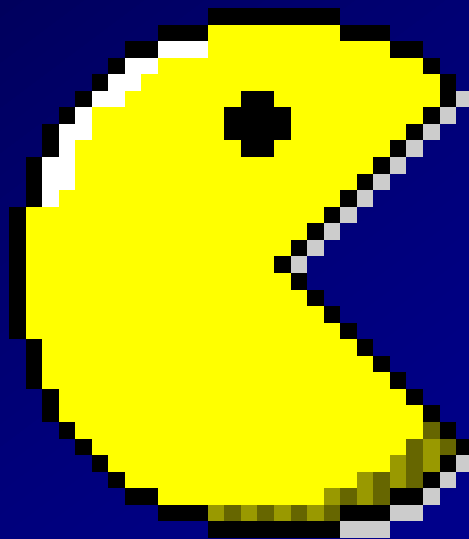
Who is the Dr. pictured below?



Dr. DBA – Ken Jacobs (in the middle)



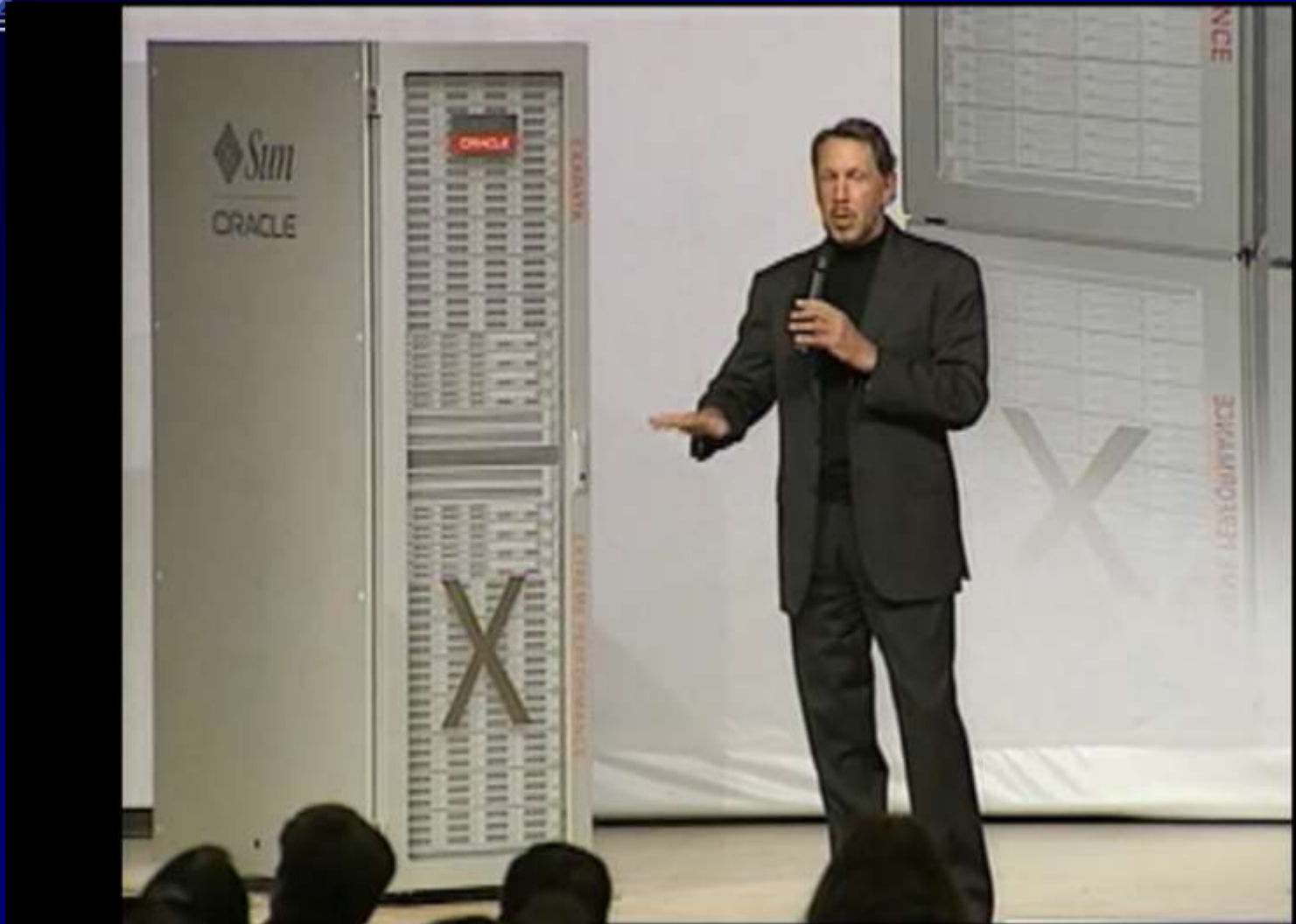
# What Video Game is this from?



Pac-Man (パックマン *Pakkuman*)



# Where do you dig for Gold?



X Marks the Spot (try this stock)!



# How do you get rid of her?





**Roughly how many Libraries of Congress if all books were digitized would fit in the 11g Database?**



Roughly 400,000 Libraries of Congress  
(20T each and 17-18 million books in each)



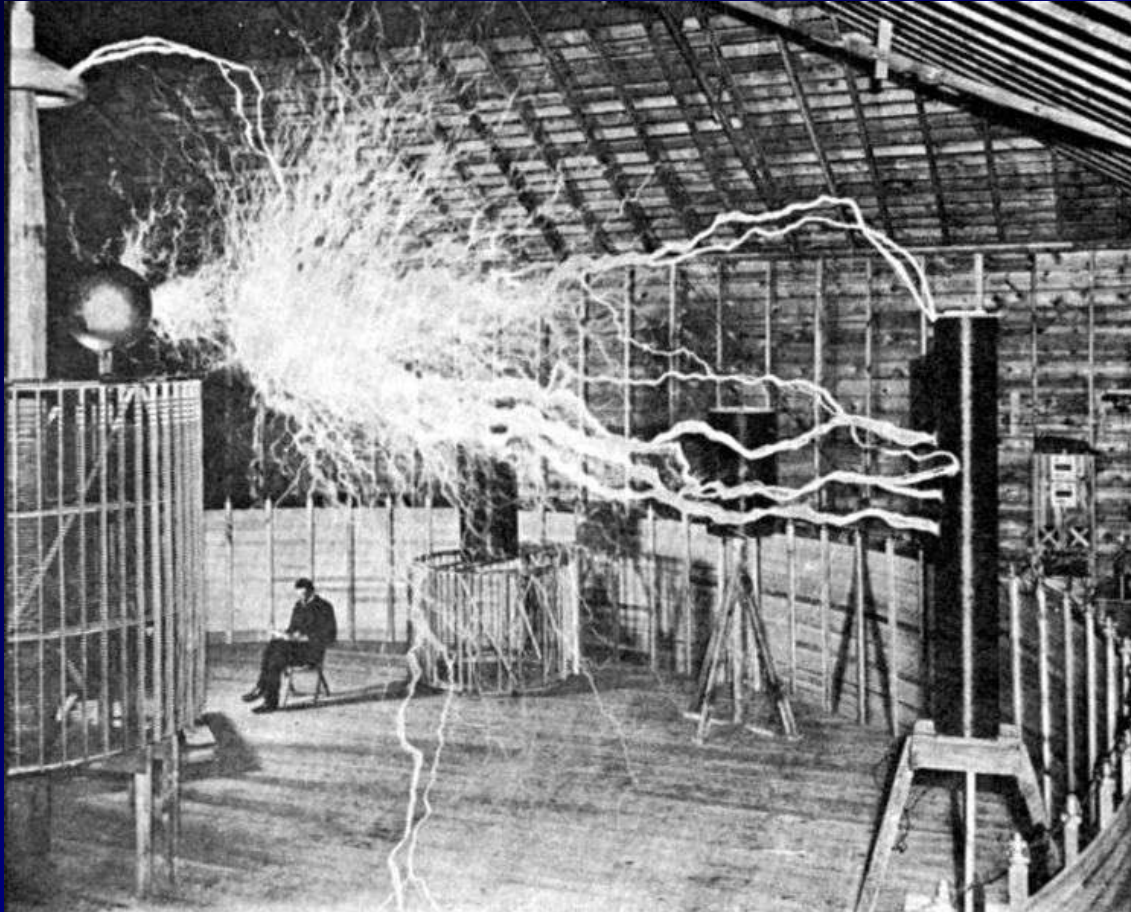
Who is it?



Aerosmith



Hardest Question...  
What famous person lived here...  
*(Hotel New Yorker)*



Nicola Tesla

Where is this located?

TUSC



New York City



# When will the last GCOUG be over?



NOW!

Thanks for Coming!!

Thanks Bob & Team!





# When will the last OOUG be over?



NOW!

Thanks for Coming!!

Thanks Bob & Team!

